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IS 5157 (1981): Forceps, Eye, Iris [MHD 5: Ophthalmic Instruments and Appliances]

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

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(Reaffirmed 1997)
Edition 2.1
(1992-04)

UDC 615.472.4 : 617.721-089

Indian Standard

SPECIFICATION FOR FORCEPS, EYE, IRIS

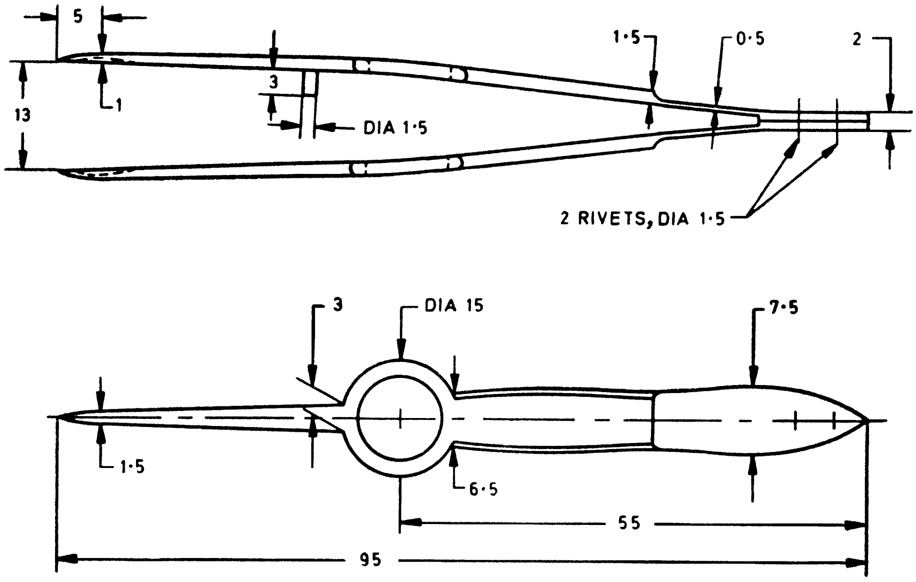
(First Revision)

(Incorporating Amendment No. 1)

Eye, Surgery Instruments Sectional Committee, CPDC 27 [Ref : Doc : CPDC 27 (1356)]

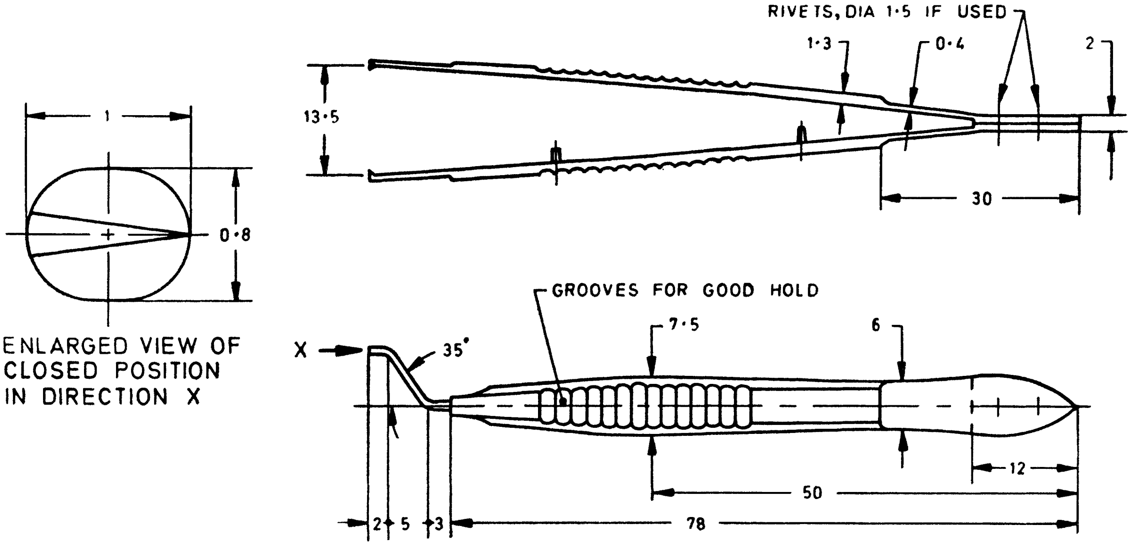
1. Scope — Covers dimensional and other requirements for multipurpose, Hes's and Fischer's patterns iris forceps used in eye surgery.

2. Shape and Dimensions — As shown in Fig. 1, 2 and 3.



All dimensions in millimetres.

FIG. 1 FORCEPS, IRIS, MULTIPURPOSE



All dimensions in millimetres.

FIG. 2 FORCEPS, IRIS, HES'S PATTERN

Adopted 10 December 1981	© BIS 2002	**Price Group 2**

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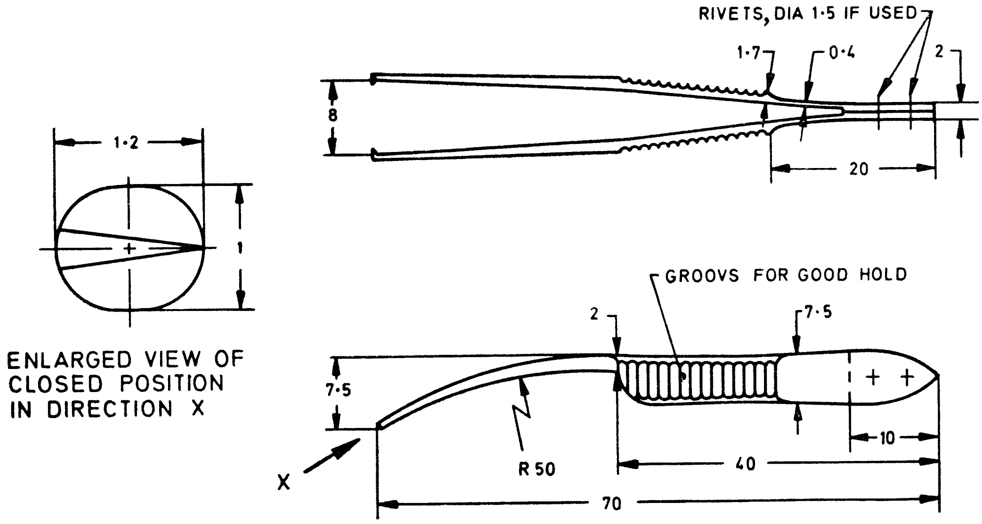

All dimensions in millimetres.

FIG. 3 FORCEPS IRIS, FISCHER'S PATTERN

2.1 A deviation of ± 2.5 percent shall be allowed on all dimensions.

3. Material — Stainless steel conforming to Designation 20 Cr 13 or 30 Cr 13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.

4. Workmanship and Finish

4.1 The arms of the forceps shall be symmetrical and well balanced.

4.2 The jaws shall close and open with even movement.

4.3 The teeth shall so match as to register properly without overriding, sticking or locking.

4.4 Where a guide pin has been provided, the registration of teeth shall correspond to the registration of the guide pin in the guide hole.

4.5 When the teeth get fully engaged with no material held in between them, the guide pin shall not project beyond the outer surface of the guide hole. The guide pin shall, in no case, stick or get locked in the guide hole.

4.6 The arms shall be free from burrs, pits, cracks, seams, scales and other surface flaws.

4.7 All edges of the forceps, except teeth shall be smooth and even and shall not be sharp.

4.8 The forceps shall be passivated and polished bright.

4.9 The teeth shall be clean and bright.

5. Heat Treatment — The forceps shall be suitably hardened and tempered to give a hardness of 380 to 440 *HV*.

6. Tests

6.1 *Load Closure* — The load to make the tips of the forceps just touch shall be 1.5 N ± 200 m N (150 ± 20 gf approx). The load shall be applied at the end of the finger grips and the points where the flattened portion for gripping ends, proximal to the tip of the forceps.

6.2 *Flexibility* — The flexibility of the arms shall be tested as given in **6.2.1** and **6.2.2**.

6.2.1 The arms of the forceps after maximum closure by hand, shall not take permanent set, and the teeth shall continue to engage and disengage accurately and properly.

6.2.2 The joint end of the forceps shall be fixed in a vice so that the riveted or welded portion of the joint is gripped firmly. By the application of force at the tip of the arms, one arm of the forceps shall be deflected in a plane at right angles to the plane of the arm, by amounts indicated below:

Type of Forceps	*Deflection at the Tip*
Curved and straight	25 mm
Barraquer's pattern	20 mm

6.2.2.1 On release of the force, no permanent set shall be observed. The test shall be repeated on the other arm.

6.3 *Corrosion Resistance Test* — The forceps shall be tested in accordance with IS : 7531-1990 'Surgical Instruments — Corrosion resistance of stainless steel surgical instruments — Methods of tests', but the forceps shall show no sign of corrosion after the test.

7. **Marking** — The forceps shall be clearly and indelibly marked with the manufacturer's name, initials or recognized trade-mark and letters 'SS'.

7.1 *ISI Certification Marking* — Details available with the Indian Standards Institution.

8. Packing

8.1 The forceps shall be wrapped individually in moisture-proof paper or polyethylene bag. They shall be packed in a manner so as to avoid contact with one another. The teeth shall be suitably protected.

EXPLANATORY NOTE

The revised version includes Hes's, Fischer's and multipurpose iris forceps which are commonly used by eye surgeons these days.

This edition 2.1 incorporates Amendment No. 1 (April 1992). Side bar indicates modification of the text as the result of incorporation of the amendment.